

Applicant : Robert Charles Skerritt et al.
Serial No. : 09/720,782
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Page 2

A' BACKGROUND OF THE INVENTION

Add the following heading before page 1, line 4:

A² DESCRIPTION OF THE PRIOR ART

Add the following heading before page 2, line 4:

A3 OBJECTIVES AND SUMMARY OF THE INVENTION

Add the following heading before page 3, line 6:

A4 BRIEF DESCRIPTION OF THE DRAWINGS

Add the following heading before page 3, line 19:

A5 DETAILED DESCRIPTION OF THE INVENTION

Replace paragraph at page 1, lines 2-3 as follows:

A6 This invention relates to a residual current detection device for use in a circuit breaker.

Replace paragraph at page 1, lines 4-13 as follows:

~~17~~ Conventionally, residual current is detected utilizing a current transformer having primary windings through which, in the case of a single phase device, load current flows in opposite directions so that if the return current is different from the outwardly flowing current because of current leakage an output current signal is induced in a secondary winding of the transformer. In the case of a multi-phase device, primary windings of the transformer are connected in all of the phase lines and the neutral line. In normal

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Page 3

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situations, when there is no current leakage, the net current induced in the secondary winding is zero and therefore no output is detected.

Replace paragraph at page 1, lines 14-21 as follows:

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Sophisticated materials have been developed for the core of the current transformer, which enable considerable accuracy to be obtained when the currents flowing in the primary windings are substantially sinusoidal. However, switch mode power supplies are often used for computers and other equipment and there is an increasing tendency for such equipment to cause dc offsets in the currents. Such developments have made detectors utilizing current transformers less reliable and prone to false tripping or failure to detect a dc current leakage.

IN THE CLAIMS

Cancel claims 1-7 without prejudice.

Add new claims 8-27 as follows:

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8. (New) A residual current detection device for detecting current imbalance comprising:
a plurality of resistive shunts, each connected in series with each of a plurality of lines through which currents can flow to and from a load; and
circuitry for detecting an imbalance between the currents flowing through the resistive shunts.
